Topics on the Mid-Year Exam

| TOPIC | Y | NY |
| :---: | :---: | :---: |
| DISTANCE, MIDPOINT, DIVISION POINT |  |  |
| - How to find the DISTANCE between two points |  |  |
| - How to find the MIDPOINT between two points |  |  |
| - How to find the ENDPOINT, given a midpoint and another endpoint |  |  |
| - How to find the DIVISION POINT given a RATIO |  |  |
| - How to find the DIVISION POINT given a FRACTION |  |  |
| ISOLATING VARIABLES |  |  |
| - How to ISOLATE a VARIABLE (get the 'x' or the ' y ' by itself) |  |  |
| BUILDING RULES FOR LINEAR FUNCTIONS |  |  |
| - How to identify INDEPENDENT and DEPENDENT variables in a WORD PROBLEM |  |  |
| - How to express an equation in 'Y = AX + B' form starting from a WORD PROBLEM |  |  |
|  |  |  |
| - How to identify the INITIAL VALUE ('b') on a GRAPH (Y-intercept) |  |  |
| - How to identify an X-INTERCEPT on a graph (and add the ' 0 ' to the y coordinate) |  |  |
| - How to find the SLOPE of a line ( ' $\mathrm{a}=\frac{y_{2}-y_{1} \text { ' }}{x_{2}-x_{1}}$ ) |  |  |
| - How to find the EQUATION of a line given the SLOPE and a POINT on the line |  |  |
| - How to find the EQUATION of a line given TWO POINTS on the line |  |  |
| - How to find an X-INTERCEPT, given an EQUATION |  |  |
| - How to find a Y-INTERCEPT, given an EQUATION. |  |  |
| PARALLEL AND PERPENDICULAR LINES |  |  |
| - How to find the EQUATION of a line PARALLEL to a given line |  |  |
| - How to find the EQUATION of a line PERPENDICULAR to a given line |  |  |
| SYSTEMS OF EQUATIONS |  |  |
| - How to TRANSLATE a STORY into a SYSTEM OF EQUATIONS (make the equations) |  |  |
| - How to determine the NUMBER OF SOLUTIONS in a SYSTEM <br> - (parallel (0), different slopes (1), parallel and coincident (same line, INFINITE) |  |  |
| - How to SOLVE a SYSTEM OF EQUATIONS (find both ' $\mathrm{x}^{\prime}$ and ' y ') |  |  |

